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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/521,348	01/13/2005	Olivier J Poncelet	82642JJH-01333	1970

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EXAMINER	
HEVEY, JOHN A	

ART UNIT	PAPER NUMBER
1709	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/521,348	PONCELET ET AL.	
	Examiner	Art Unit	
	John A. Hevey	1709	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-19 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-19 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date 13 Jan 2005.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Status of Application

The claims 1-19 are pending and presented for examination.

Priority

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. EP03/07579, filed on 07/14/2003.

Information Disclosure Statement(IDS)

The information disclosure statement (IDS) is submitted on 01/13/2005. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner. Please refer to applicants' copy of the 1449 submitted herewith.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claim 1 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for aluminum concentrations between 1.5E(-2) and 0.3 mol/l, does not reasonably provide enablement for aluminum concentrations less than 1.5E(-2) mol/l. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims.

The instant invention is related to the preparation of an aluminosilicate material. The state of the art recognizes aluminosilicate materials with low concentrations of aluminum but it is not recognized for such a material to have an aluminum concentration of zero. The specification provides examples of aluminum concentrations as low as 1.5E(-2) mol/l but lacks examples below this value. Given the unpredictability found in the art, it would be impossible to predict the outcome of utilizing an aluminum concentration below 1.5(-2) mol/l.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. The term "ambient" in claim 1 is a relative term which renders the claim indefinite. The term "ambient" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-12 and 17 rejected under 35 U.S.C. 102(b) as being anticipated by Poncelet (US6468492).

Poncelet (US6468492) is drawn to a method to prepare an aluminosilicate polymer, comprising contacting a mixed aluminum and silicon alkoxide or a mixed aluminum and silicon precursor resulting from the hydrolysis of a mixture of aluminum and silicon compounds with an aqueous alkali (sodium or potassium hydroxide; col. 1., line 67) in the presence of silanol groups and kept at a molar concentration of aluminum between 5E(-4) and 5E(-2) and Al/Si molar ratio between 1 and 3. Said mixture is stirred (see Fig.1, and example 1) at a temperature below 100 C (here interpreted as within the range of ambient temperature) for a time sufficient to complete polymerization in the presence of silanol groups. Where silanol groups are provided by silica or glass beads with a diameter between .2 and 5 mm, preferably 1 to 3 mm (col. 2, line 38), followed by removal of residual ions/byproducts.

US'492 teaches said method to prepare aluminosilicate polymer wherein alkali/Al ratio is about 2.3 (col. 3, line 34-47) and wherein alkali/Al ratio is about 3 (col. 3, line 34-51). In addition, the art teaches where said precursor of mixed aluminum and silicon compound is a product of the hydrolysis of aluminum salts or aluminum haloalkoxides with silicon alkoxides or choloroalkoxides. Also, where said precursor is the result of the reaction of an aluminum halide and a silicon alkoxide such as tetramethyl or tetraethyl orthosilicate (col. 1, line 62). (Note, choice of tetramethyl or tetraethyl orthosilicate inherently read on silicon compounds comprising only hydrolysable functions as claimed in the instant case) US'492 further teaches the introduction of a chelating agent in 50:50 mixture of HCL and acetic acid to the precipitate (col.3, lines 54-58).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 13-16 rejected under 35 U.S.C. 103(a) as being unpatentable over Poncelet (US6468492) as applied above, in view of Pinnaviaia et al. (US7132165).

Poncelot's teachings mentioned in the above 102 rejection, provide for the addition of a chelating agent, specifically acetic acid (col.3, lines 54-58) but fails to teach the particular order of chelate addition in the instant claims. Whereas the instant claims 13-16 teach addition of a chelating agent after elimination of byproducts from the reaction medium (i.e. filtration), Poncelot teaches chelating agent addition prior to said byproduct elimination. The prior art also fails to teach the addition acetic acid followed by the addition of another different chelating agent. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to additionally use one or more chelating agents after said byproduct elimination as taught by Pinnaviaia (col.13, lines 43-46). Pinnaviaia teaches the uses of various alkylating reagents after material synthesis. One would be motivated to make such a modification to functionalize the surface of material after synthesis as taught by Pinnaviaia (col.13, lines 43-46). Furthermore, the instant case does not provide evidence why the order of

chelate addition (prior to, or post byproduct elimination) would result in a materially different result.

5. Claims 18 and 19 rejected under 35 U.S.C. 103(a) as being unpatentable over Poncelet (US6468492).

Poncelet US'492 teaches a method to prepare an aluminosilicate polymer, comprising contacting a mixed aluminum and silicon alkoxide or a mixed aluminum and silicon precursor resulting from the hydrolysis of a mixture of aluminum and silicon compounds with an aqueous alkali (sodium or potassium hydroxide; col. 1., line 67) in the presence of silanol groups kept at a molar concentration of aluminum between 5E(-4) and 1E(-2) and Al/Si molar ratio between 1 and 3. Said mixture is stirred (see Fig.1, and example 1) at a temperature below 100 C (here interpreted as within the range of ambient temperature) for a time sufficient to complete polymerization in the presence of silanol groups.

Poncelet US'492 fails to teach the material obtainable by said method and the Raman spectrum characteristics required by Claim 19 of the instant case.

However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the method to produce an aluminosilicate polymer taught by Poncelot US'492 to actually produce said polymer. Furthermore, the Raman spectrum figures are inherent characteristics of the material obtainable by said method to prepare an aluminosilicate polymer. The motivation to produce the material obtainable by said method would be to produce a functional material for use or profit.

Double Patenting

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. Claims 1-19 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-11 and 17-24 of copending Application No. 10521899 in view of Pinnavaia et al. (US7132165). The conflicting claims are identical to the instant claims except for the addition of non-hydrolysable functional groups of silicon compounds as taught by Pinnavaia et al. It would have been obvious to one of ordinary skill in the art at the time the invention was made to make such a modification as set forth in the 103 rejection above.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Furthermore, there is no apparent reason why applicant would be prevented from presenting claims corresponding to those of the instant application in the other copending application. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

8. Claims 18-19 provisionally rejected on the ground of nonstatutory double patenting over claim 1 of copending Application No. 10522006. This is a provisional double patenting rejection since the conflicting claims have not yet been patented.

The subject matter claimed in the instant application is fully disclosed in the referenced copending application and would be covered by any patent

granted on that copending application since the claims found in both the referenced copending application and the instant application are claiming common subject matter, as follows: a material obtainable by a method for preparing aluminosilicate polymer comprising steps for treating a mixed aluminum and silicon alkoxide comprising only hydrolysable functions in the presence of silanol, stirring the mixture in the presence of silanol groups until a polymer is formed, and eliminating the byproducts from the reaction medium. Since the scopes of the claims in both the instant application and the copending application are overlapping, the claimed subject matter of the instant claims is not patentably distinct over the claims of the copending application.

Furthermore, there is no apparent reason why applicant would be prevented from presenting claims corresponding to those of the instant application in the other copending application. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US10521898 drawn to an ink jet recording element comprising at least one hydrosoluble binder and at least one aluminosilicate polymer, US5888711 drawn to a process for preparing a polymeric conductive material based on aluminum and silicon, and US10054830 drawn to a process for the manufacture of high-purity aluminosilicates.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John A. Hevey whose telephone number is

571-270-3594. The examiner can normally be reached on Monday - Friday 7:30 AM to 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vickie Kim can be reached on 571-270-0579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JAH

VICKIE Y. KIM
SUPERVISORY PATENT EXAMINER